

CLAIMS

1. Intake manifold or distributor for an air feed circuit for an internal-combustion engine comprising, on the one hand, an intake or plenum chamber of elongate shape and provided at one of its longitudinal ends with an intake aperture
5 and, on the other hand, at least two pipes laterally connected to said chamber, said pipes extending at least partially around said intake chamber from their inlet apertures opening therein and having a curved structure over at least a portion of their length, the manifold being characterised in that it consists of two parts (6 and
10 7) produced by injection moulding of thermoplastic material and joined to one another in the region of peripheral joint zones (8) located on a joining surface (8') crossing said manifold (1), a first part (6) in one piece forming a first longitudinal portion (9) of the casing defining the intake chamber (2), an intermediate portion (10) of a side portion of the wall of each of the various pipes (4) and an end
15 conduit segment (11) of each of said pipes (4) ending in the outlet aperture (5') of each of them, and a second part (7) in one piece forming a second complementary longitudinal portion (12) of the casing defining the intake chamber (2), an end conduit segment (13) of each of said pipes (4) ending with the inlet aperture (5) of each of these pipes (4) opening into the intake chamber (2) and a complementary
20 intermediate portion (14) of a side portion of the wall of each of the pipes (4).
2. Manifold according to claim 1, characterised in that the first longitudinal portion (9) corresponds to a main portion of the casing defining the intake chamber (2) and comprises a joining piece in one piece (9') defining the intake
25 aperture (3) and in that the second longitudinal portion (12) corresponds to a cover closing said first longitudinal portion (9), the joining surface (8') extending mainly below the neutral fibres or the central axes of circulation of the pipes (4).

3. Manifold according to claim 1, characterised in that the pipes (4) are connected to one another, between adjacent pipes, by connecting portions (15) in the form of plates or strips formed in one piece with the constituent parts (6, 7), on the one hand for the second part (7), at least in the region of the end conduit segments (13) of the pipes (4) opening into the intake chamber (2) and, if necessary, of the longitudinal edges (14') of the complementary intermediate portions (14) of side wall portions of the pipes (4) and, on the other hand for the first part (6), in the region of the end conduit segments (11) of the pipes (4) defining the outlet apertures (5') and, if necessary, of the longitudinal edges (10') of the complementary intermediate portions (10) of side wall portions of the pipes (4), these connecting portions (5) forming an assembly and/or fixing flange (15') in one piece in the region of the end conduit segments (11) defining the outlet apertures (5').
4. Manifold according to claim 3, characterised in that the connecting portions (15) of the intermediate portions (10, 14) of side wall portions of pipes (4) of the first and second parts (6 and 7) form portions of peripheral joint zones (8).
5. Manifold according to claim 2, characterised in that a portion of the second longitudinal portion of the casing forming the cover (12) also forms a portion of the walls of the end conduit segments (13) of said pipes (4) ending in the respective inlet apertures (5).
6. Manifold according to claim 1, characterised in that the end conduit segments (13) of the pipes (4) opening into the intake chamber (2) comprise circulation axes which are substantially rectilinear and located in respective mutually parallel planes, the segments (13) being obtained by moulding by means of a core displaced in translation, optionally in two different directions.
7. Manifold according to claim 1, characterised in that the end conduit segments (13) of the pipes (4) opening into the intake chamber (2)

comprise curved circulation axes located in respective mutually parallel planes, these segments (13) being obtained by moulding by means of a rotary core.

5 8. Manifold according to claim 1, characterised in that the segments of the conduits (13) of the pipes (4) opening into the intake chamber (2) comprise curved circulation axes with a helical development, these segments being obtained by moulding by means of a rotary core displaced with a combined rotational and translatory movement.

10 9. Method for producing an intake manifold or distributor according to claim 1, characterised in that it consists in separately producing the first part (6) and the second part (7) by injection moulding of thermoplastic material, whether reinforced or not, the second part (7) optionally being produced by a mould with a rotary core, then joining these two parts (6 and 7) by vibration
15 welding in the region of peripheral joint zones (8).